

Work Order ID 147008

147008

Page 1

Wednesday, May 25, 2016 12:59:21 PM

Item ID: D3796-043 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Aft Wearplate Weldment
 Start Date: 5/25/2016 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 6/3/2016 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: dm Date: 16/05/25 Tooling: _____ Date: _____
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
 Run Start *NR1*
 Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3796	B

100 FLOW WATER JET 0.00
 100
 Waterjet Memo 0.00
 FLOW CNC Waterjet 1-Cut as per Dwg D3796 Dwg Rev: B
 Prog Rev: B
 2-Deburr if necessary

110 QC2- Inspect parts off machine FAI/FAIB 0.00
 110
 QC Memo 0.00
 Quality Control

2 on 16/05/26
2 on 16/05/26

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY					
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

147008

Wednesday, May 25, 2016 12:59:21 PM

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 5/25/2016 **Start Qty:** 2.00 ***2***

Cust Item ID:

Required Date: 6/3/2016 **Req'd Qty:** 2.00 ***~***

Customer:

Reference:

Run Start *NR1*

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC8- Inspect parts - second check

0.00

120

QC Memo

0.00

Quality Control

MAY 31 2016

130	0.00
-----	------

130

Large Fab

Large Fab

Memo	0.00
-------------	------

Large Fab

Weld hardcoat (template DT9877) and cups as per dwg D3796 using DT9040 jig

2059 hardcoat batch: M/30712

304/316 S.S. ROD batch: *M/23823*

140	QC9- Inspect visual per QSI004- Fusion Welds	0.00
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140

QC Memo

0.00

Quality Control

DAS

$$\begin{array}{r} 9 \\ \hline 9-89 \end{array}$$

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Work Order ID 147008***147008***

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Wednesday, May 25, 2016 12:59:21 PM

Item ID: D3796-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Aft Wearplate Weldment
Start Date: 5/25/2016 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 6/3/2016 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150									DAS
QC	Memo	0.00							9
Quality Control									9-89
160	Identify as per dwg & Stock Location: <u>S1605</u>	0.00							
160									
Packaging	Memo	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									

MCS JUN 01 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

Picklist Print

Page 1

Wednesday, May 25, 2016 12:59:28 PM

Work Order ID: 147008

147008

Parent Item: D3796-043

D3796-043

Parent Item Name: Aft Wearplate Weldment

Start Date: 5/25/2016

Required Date: 6/3/2016

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:A 08-08-05 new issue DD verified by:ec
 IPP Rev:B 08-09-10 revA as per dwg (ecn 08-513) DD VERF:EC IPP REV:C
 AS PER PB1 12-07-04 JLM VERIOFIED BY:DD IPP REV:D
 12.09.06 PER DWG REV.B DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M304S16GA		Purchased	No			100	sf	143.6708	1.912	4.025263			
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M304S16GA

304/316 Sheet .063

**

PR 05/27/2016

Location	Loc Qty	Loc Code
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MAT010	51.05	
--------	-------	--

m134677	51.05	
---------	-------	--

MAT019	5	
--------	---	--

m134551	5	
---------	---	--

TPI	87.620844	
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m134604	87.620844	
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D4379-3		Manufactured	No			130	Each	82.0000	12	24			
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D4379-3

Wearplate Cup

**

EL /65-31

Location	Loc Qty	Loc Code
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WA001	22	
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131661	2	
--------	---	--

132740	20	
--------	----	--

WA002	60	
-------	----	--

135592	20	
--------	----	--

141353	40	
--------	----	--

DQA: _____ Date: _____



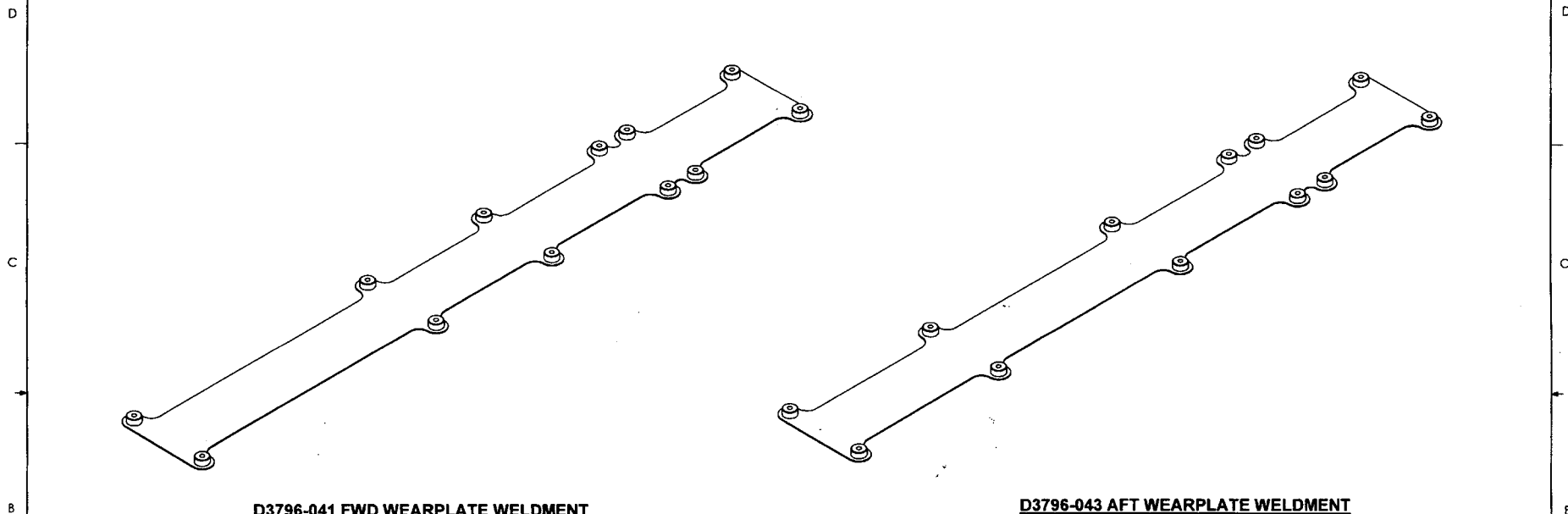
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval																																																								
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																								OTHER :																																							

8 7 6 5 4 3 2 1



D3796-041 FWD WEARPLATE WELDMENT

D3796-043 AFT WEARPLATE WELDMENT

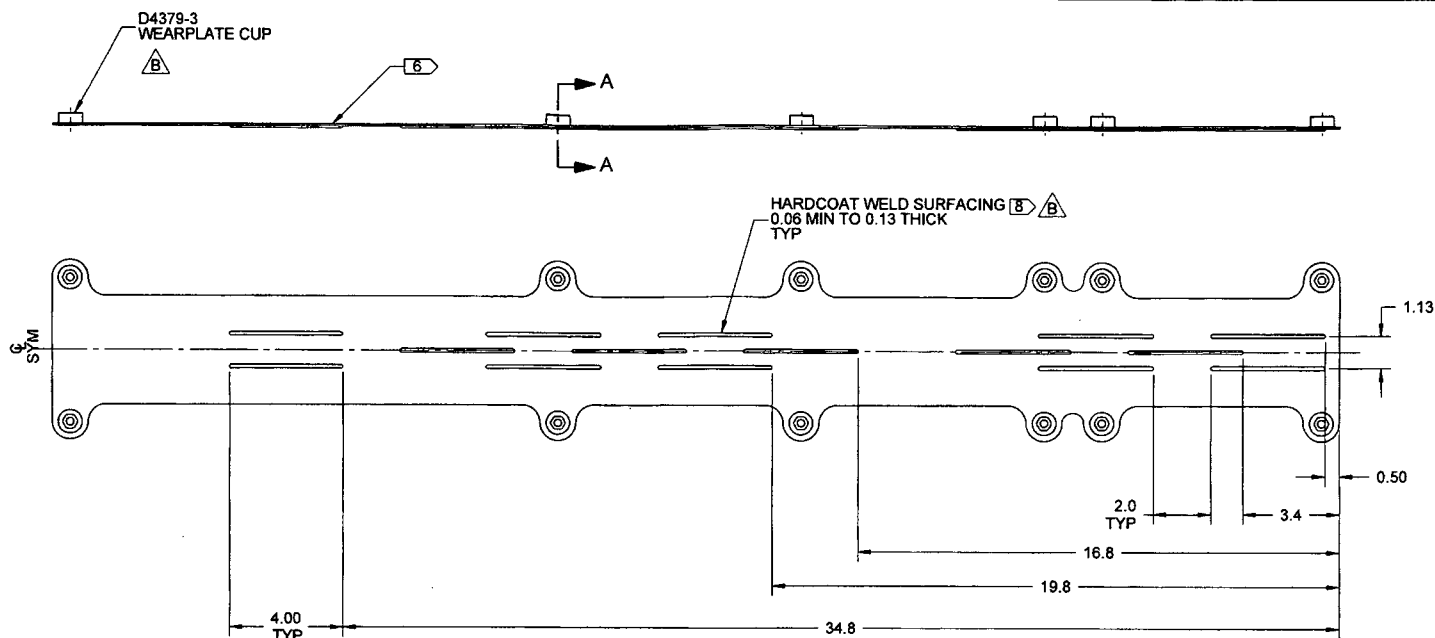
RELEASED
2012-08-10
W

B	REPLACED D3009-3 CUP WITH D4379-3 WEARPLATE CUP; REMOVE REFERENCE TO 2059 HARDCOAT WELD SURFACING TO ALLOW ALTERNATIVE HARDCOAT MATERIALS PER QSI 004 (C4-2 & C5-3); REMOVE POWDER COAT FINISH NOTE 2 (SHEETS 2 & 3)	AP	12.07.04
A	NEW ISSUE	MB	08.08.01
REV.	DESCRIPTION	BY	DATE
DESIGN	MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	W	DRAWING NO. D3796 412 SKI WEARPLATE	
MFG. APPR.	W		
APPROVED	W	412 SKI WEARPLATE COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. ANY USE OF THE EXPRESS OR IMPLIED INFORMATION THEREIN IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DE APPR.	W		
DATE	12.07.04	REV. B SHEET 1 OF 4 SCALE NTS	

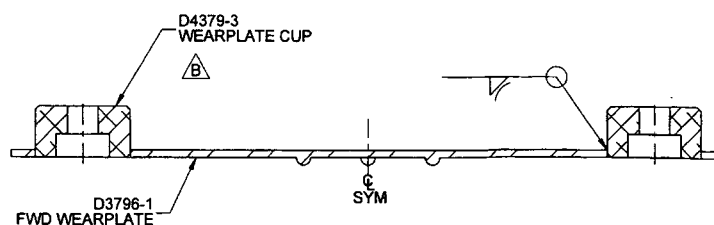
w/o 147008

2m 16/05/25

QTY	P/N	DESCRIPTION
X	D3796-041	FWD WEARPLATE WELDMENT
1	D3796-1	FWD WEARPLATE
12	D4379-3	WEARPLATE CUP



D3796-041 FWD WEARPLATE WELDMENT



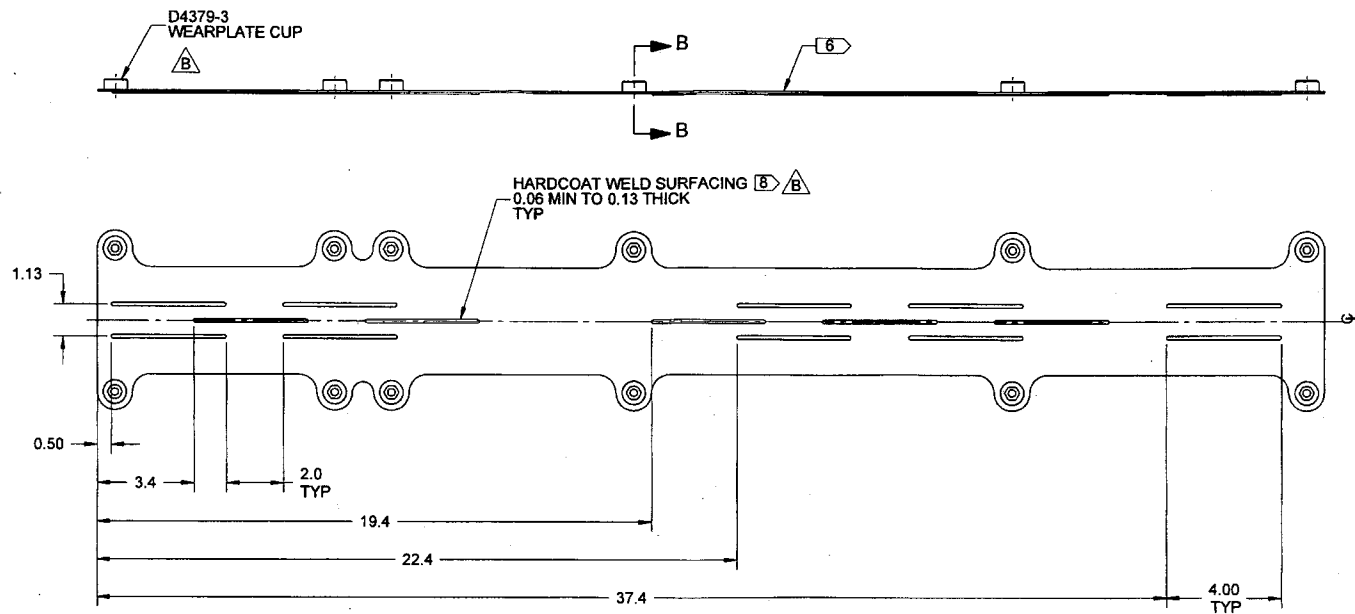
**SECTION A-A D5-2
SCALE 4X, TYP**

RELEASED
2012-08-10
MJP

- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3796-041" AND B/N "BXXXXX" USING FINE POINT PERMANENT INK MARKER PER QSI 044
 - 7) WEIGHT: 4.00 lbs
 - 8) WELD PER DART QSI 004

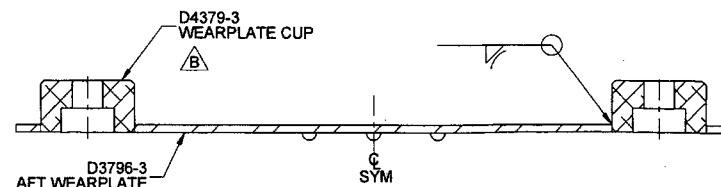
DESIGN	MB	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	TP	DRAWING NO.	REV. B
MFG. APPR.	IS	D3796	SHEET 2 OF 4
APPROVED	10	TITLE	SCALE
DE APPR.	10	412 SKI WEARPLATE	NTS
DATE	12.07.04	COPYRIGHT © 2008 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

QTY	P/N	DESCRIPTION
-043		
X	D3796-043	AFT WEARPLATE WELDMENT
1	D3796-3	AFT WEARPLATE
12	D4379-3	WEARPLATE CUP



D3796-043 AFT WEARPLATE WELDMENT

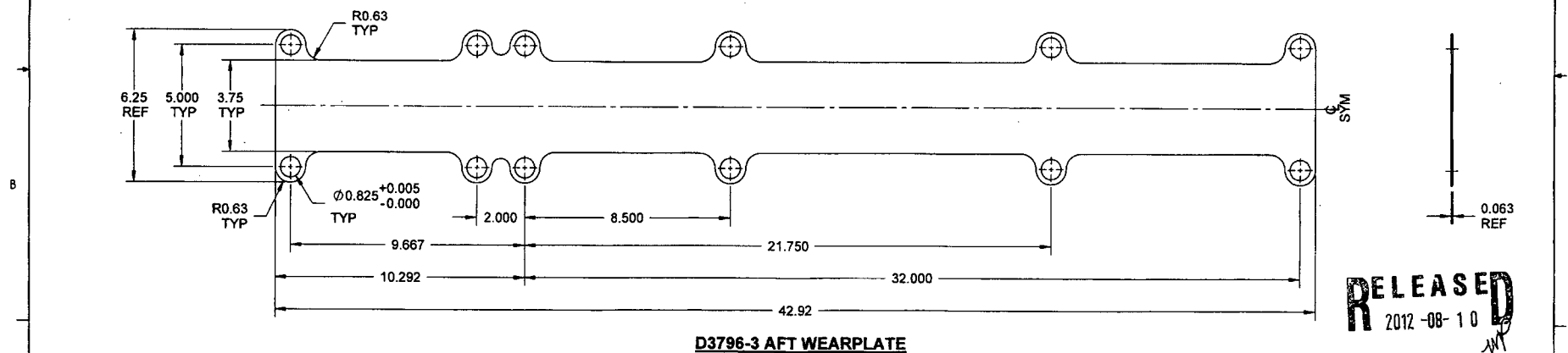
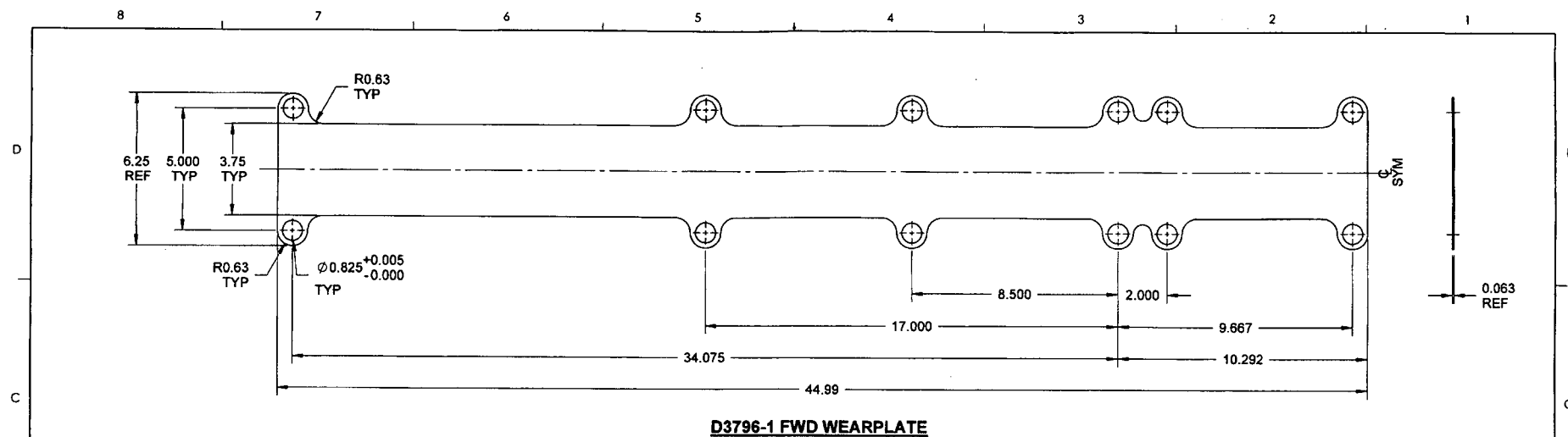
RELEASED
2012-08-10



SECTION B-B D5-3
SCALE 4X, TYP

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3796-043" AND
B/N "BXXXXX" USING FINE POINT PERMANENT INK MARKER PER QSI 044
 - 7) WEIGHT: 3.86 lbs
 - 8) WELD PER DART QSI 004

DESIGN	MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3796 TITLE 412 SKI WEARPLATE SCALE NTS REV. B SHEET 3 OF 4
DRAWN	AP	
CHECKED		
MFG. APPR.		
APPROVED		
DE APPR.		
DATE	12.07.04	COPYRIGHT © 2008 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONCEPTION THAT IT IS NOT TO BE REPRODUCED, COPIED, OR COMMUNICATED TO ANY OTHER PERSON OR ENTITY.



NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, (ANNEALED) 2B FINISH, 16 GAUGE (0.063 THICK) PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240, REF. DART SPEC. M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3796-1 = 3.37 lbs
D3796-3 = 3.11 lbs

DESIGN	MB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	AP	D3796	SHEET 4 OF 4
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	412 SKI WEARPLATE	NTS
DATE	12.07.04	COPYRIGHT © 2001 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

RELEASED
2012-08-10